
Lab Dept: Microbiology

Test Name: AFB CULTURE, BLOOD

General Information

Lab Order Codes: MYCOB

Synonyms: Blood Culture, *Mycobacteria*; Acid-Fast Blood Culture; Culture, Blood for AFB (Acid-Fast Bacilli); AFB Culture, Blood; AFB Culture; Culture; *Mycobacteria* Culture, Blood; BC, Acid Fast

CPT Codes: 87116 – Culture, tubercle or other acid-fast bacilli any source, with isolation and presumptive identifications of isolates
87118 – Culture, mycobacterial, definitive identification, each isolate, MALDI-TOF Mass Spec AFB (if appropriate)
87150 – Id, Mtb Speciation, PCR (if appropriate)
87150 – Mycobacteria Probe Ident, Broth (if appropriate)
87150 – Mycobacteria Probe Ident, Solid (if appropriate)
87153 – Mtb PZA Confirmation, *pcnA* sequence (if appropriate)
87153 – Mycobacteria Identification by Sequencing (if appropriate)
87150 - Id, MTB complex Rapid PCR (if appropriate)

Test Includes: Culture and identification of mycobacteria, drug resistant studies if appropriate. All positive results are reported immediately by phone to the physician or patient's nurse.

Logistics

Lab Testing Sections: Microbiology - Sendouts

Referred to: Mayo Clinic Laboratories (MML: CTBBL)

Phone Numbers: MIN Lab: 612-813-5866

STP Lab: 651-220-6555

Test Availability: Daily, 24 hours

Turnaround Time: Within 42 days, positive results are reported when identified. A final negative report will be issued after 42 days.

Special Instructions: **Specific body site and date/time of collection** are required for specimen processing. **Do not** submit more than 1 or 2 blood cultures per acute illness. **Specimen must be processed within 72 hours of draw.**

Specimen

Specimen Type: Whole blood

Container: Green (Sodium or Lithium Heparin) top NO GEL tube

Volume: Blood: 8 - 10 mL, minimum 5 mL

Collection: **BLOOD:**
Venipuncture for patients greater than 26 weeks gestation OR greater than 2 weeks of age:

Prep with CloraPrep Sepp® Applicator with 2% CHG

1. Disinfect the stopper of green top tube.
2. Break the Sepp® ampule to release the 2% CHG.
3. Apply the CloraPrep® solution using a back-and-forth friction scrub for 30 seconds.
4. Allow the area to dry for 30 seconds.
5. If the site must be touched during venipuncture, disinfect the gloved fingers.
6. Collect 8-10 mL of blood and aseptically inoculate green top tube.

Prep with CloraScrub™ Swab with 3.15% CHG

1. Disinfect the stopper of the green top tube with alcohol and allow to dry.
2. Open the Chlorascrub™ Swab package, do not unfold wipe.
3. Apply the Chlorascrub® wipe using a back-and-forth friction scrub for 15 seconds.
4. Allow the area to dry for 30 seconds.
5. If the site must be touched during venipuncture, disinfect the gloved fingers.
6. Collect 8-10 mL of blood and aseptically inoculate the green top tube using a needleless system.

Venipuncture for patients less than 26 weeks gestation AND less than 2 weeks of age:

Prep with 2% tincture of iodine:

1. Disinfect the stopper of the green top tube and allow to dry.
2. Scrub venipuncture site with 70% alcohol for 1 minute using the Sepp® applicator. Allow to dry.
3. Using the Sepp® applicator, apply 2% tincture of iodine to site starting at the center and moving outward in concentric circles. Allow to dry, approximately 30 seconds.
4. If the site must be touched during venipuncture, disinfect the gloved fingers.
5. Collect 8-10 mL of blood and aseptically inoculate the green top tube.
6. Following collection, remove the iodine using the Sepp® applicator or an alcohol pad.

Line Draw (All ages):

1. Prep catheter port by scrubbing the hub for 30 seconds using chlorhexidine gluconate (CHG) and allowing to dry.
2. Aseptically collect 8-10 mL of blood through the injection port. Blood may be collected without first drawing a discard.
3. Aseptically inoculate the green top tube using a needleless system.

**Processing/Transport/
Storage:**

Do NOT centrifuge or open tube. Send whole blood in original container.

Onsite collections: Transport to the laboratory immediately at room temperature. Refrigerated temperature is acceptable but not preferred.

Offsite collections: Specimens must be promptly transported to the laboratory, at room temperature with the next available courier, not to exceed 24 hours from the time of collection.

Store and send **whole blood specimen in original tube** to Mayo at room temperature within 72 hours of collection.

Sample Rejection:

Improperly labeled specimen; specimens with prolonged transit time (see [Transport/Storage](#) for requirements); specimen not submitted in appropriate tube type; insufficient volume; external contamination; anticoagulants other than lithium heparin or sodium heparin; specimens other than whole blood. If an unacceptable specimen is received, the physician or nursing station will be notified and another specimen will be requested before the specimen is discarded.

Interpretive

Reference Range:

Negative
If positive, mycobacteria is identified.
A final negative report will be issued after 42 days of incubation.

Critical Values:

Positive cultures will be called to the physician or patient's nurse.

Limitations:

- Results must be interpreted in conjunction with the patient's history and clinical picture because false-positive results may occur due to specimen contamination.
- A negative result does not rule-out mycobacteremia. The organism may be present at quantities below the limit of detection or may be transiently present.
- If *Mycobacterium genavense* is suspected, indicate on request form or contact laboratory. Mycobactin J (an iron supplement) will then be added to the culture to support growth.

Methodology:

Continuously monitored automated broth culture instrument with conventional methods for identification of Mycobacteria

References:

[Mayo Clinic Laboratories](#) July 2023

Updates:

5/4/2006: Method and specimen container, volume requirement changes.

10/31/2006: Added alternate tube for collection when Isolator tubes are not available.

4/24/2008: Removed the use of alternate green top tube when Isolator tubes are unavailable.

3/2/2009: Updated collection information for venipuncture options.

6/16/2010: Line draw preparation update

11/10/2014: Added offsite collection

2/15/2016: Moved from Hennepin County Medical Center to Mayo. Bone Marrow now considered non-blood by Mayo.

7/19/2023: Removed Isolator tube as an acceptable container. Added specimen processing instructions to clarify whole blood in original tube (do not centrifuge).